

Copy kept by  
Mucha on 10/23/78

*Don Martin*  
*Paul Blumhansky*  
*Roger Ray East*

OCT 17 5 10 PM '78

RATUZYUW RHEGLLL3588 2902122-UUUU--RHEGNVO.

ZNR UUUUU

405189

R 172122Z OCT 78

FM UCLLL WILLIAM L ROBISON L-453 LIVERMORE CA

TO RHEGNVO/US DOE NVOO ROGER RAY LAS VEGAS NV

INFO RUKVAAA/ENEWETAK RADIOLOGICAL SURVEILLANCE PROGRAM MANAGER

ENEWETAK ATOLL

AE

BT

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UNCLAS

TO EVALUATE THE POTENTIAL DOSE TO POPULATION THROUGH THE FOOD CHAIN IS ESSENTIAL TO HAVE INFORMATION ON THE SOIL CONCENTRATIONS AS A FUNCTION OF DEPTH. I RECOMMEND THAT SOIL SAMPLES BE TAKEN, AFTER CLEAN-UP OF THE NORTHERN ISLANDS AT ENEWETAK ATOLL ACCORDING TO THE FOLLOWING PROFILE SEQUENCE:

- 0-5 CM
- 5-10 CM
- 10-15 CM
- 15-25 CMM
- 25-40 CM
- 40-60 CM /OPTIONAL/

REPOSITORY DOE/PASO

COLLECTION DOE/NV

BOX No. 1236

LLNL FOLDER #3

FOLDER FY 1979

GENERAL CORRESPONDENCE

PASO ROUTING SLIP			
	A	I	SEE ME INIT
ADMIN. ASSISTANT	<input checked="" type="checkbox"/>		
PROJECT ENGINEER	<input checked="" type="checkbox"/>		
ASST. REP.	<input checked="" type="checkbox"/>		
ASST. REP.	<input checked="" type="checkbox"/>		
REMARKS:			

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ANALYSIS OF THESE SAMPLES FOR 137CS, 90SR, 241AM AND 239 PLUS 240PU WOULD LEAD TO A DATA BASE WHICH WOULD BE MOST USEFUL FOR ASSESSING DOSES ASSOCIATED WITH USE OF THE NORTHERN ISLANDS PORT CLEAN-UP.

AS MANY OF THESE SAMPLES AS POSSIBLE SHOULD BE TAKEN ON THE NORTHERN ISLANDS OF ALICE THROUGH URSULA. THE FOLLOWING IS A RECOMMENDED PRIORITY FOR SAMPLING OF THE ISLANDS:

1. ENJEBI /JANET/
2. AOMON /SALLY/
3. BIJIRE /TILDA/
4. BOKEN /IRENE/
5. MIJIKADREK /KATE/
6. LUJOR /PEARL/
7. KIDRINEN /LUCY/
8. BOKENELAB /MARY/
9. LOUJ /DAISY/
10. ELLE /NANCY/
11. BOKOMBAKA /BELLE/
12. KIRUNU /CLARA/
13. BOKOLUO /ALICE/
14. LOJWA /URSULA/

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THE EMPHASIS OF COURSE SHOULD BE ON THOSE ISLANDS THAT HAVE BEEN  
SUBJECT TO SOIL REMOVAL OR REDISTRIBUTION.

THE 0-5 CM SAMPLE OF EACH PROFILE WILL PROVIDE THE DATA NEEDED TO  
EVALUATE THE RESUSPENSION/INHALATION PATHWAY; THE REST OF THE  
PROFILE SAMPLES WILL BE USED IN CONJUNCTION WITH THE 0-5 CM SAMPLE  
TO EVALUATE THE TERRESTRIAL FOOD CHAINS.

END REF LSO/BA-3588

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OCT 23 1978

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PASO ROUTING SLIP

	A	SEE ME	INIT
DIRECTOR		<input checked="" type="checkbox"/>	
Admin. Assistant			
PROJECT MANAGER			
ADMIN. ASST.			
PROJECT MANAGER			
SEND COPY TO:			
HEAD			
ASST. DIR.			
ASST. DIR.			
CHIEF			
REMARKS:			
CA			

ACTION: JT685-02,  
INFO:

PTTUZYUW RUHHDNA0501 2950645-UUUU--RUHVAA  
ZNR UUUUU

P 220520Z OCT 78

FM DOE/ERSP ENEWETAK MI  
TO RHEGLLL/LAWRENCE LIVERMORE LAB LIVERMORE CA

RHEGNVO/USDOE LAS VEGAS NV

~~RUHVAAA/USDOE/PASO HICKAM AFB HI~~

INFO RHEGGTN/USDOE HQ GERMANTOWN MD  
BT

UNCLAS NONWD

BRUCE CHURCH SENDS TO W. L. ROBISON, LLL; ROGER RAY, LV; ROGER RAY,  
HICKAM; INFO ATTN: TOM MCCRAW, MD.

**SUBJECT: SOIL SAMPLING FOR SR-90**

REF: MSG 172122Z OCT 78 SMAE SUBJECT FROM LLL.

THE ERSR HAS EXAMINED THE SOIL SAMPLE THRU PUT CAPABILITY WITH  
PRESENT PERSONNEL AND EQUIP (ALT 1) AND WXPANDED PERSONNEL AND EQUIP-  
MENT (ALT 2). FOLLOWING IS A PRESENTATION OF ALTERNATIVES AND QUES-  
TIONS THAT SHOULD BE CONSIDERED BEFORE LAUNCHING A SAMPLING PROGRAM.  
- LAB PRESENTLY UNDERWAY TO TRIAL TEST ANALYTICAL PROCEDURES.

ALT 1 : SUSTAINED PRODUCTION RATE - 12 SAMPLES/DAY -

SR-90, CS-137, AM-241, PU-239, 240.

PERSONNEL - EXISTING MANPOWER - CHEMISTRY 1 SHIFT.

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EQUIPMENT - ADD ONE AUTOMATIC SAMPLE CHANGER UNIT (AVAILABLE FROM  
FRST).

COUNTING - EXTENDED HOURS.

NINE MONTHS OF OPERATION - ASSUME LAB ROLLUP JUL 79.

TOTAL PRODUCTION - 2800 SAMPLES.

SOME INCREASE OF LAB SUPPLIES WILL BE REQUIRED.

INCREASE BALL MILL CAPACITY IN PREP LAB.

ALT 2 : SUSTAINED PRODUCTION RATE - 24 SAMPLES/DAY -

SR-90, CS-137, AM-241, PR-239, 240.

PERSONNEL - ADD 2 CHEM TECHS - CHEMISTRY 2 SHIFTS.

- ADD 1 COUNT TECH - COUNTING 3 SHIFTS.

EQUIPMENT - ADD ONE MORE AUTOMATIC SAMPLE CHANGER UNIT FROM FRST

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(TOTAL OF 3 SYSTEMS IN LAB).

- ADD 1 MORE GAMMA COUNTING SYSTEM (USE IMP SPARE SYSTEM).

EIGHTEEN MONTHS OF OPERATION - ASSUME LAB ROLLUP APR 80.

TOTAL PRODUCTION - 11200 SAMPLES.

INCREASE IN LAB SUPPLIES.

INCREASE BALL MIL CAPACITY IN PREP LAB.

FOR THE 14 ISLANDS LISTED IN REFERENCED TWX, A 50 METER GRID YIELDS 1053 LOCATIONS (FOR INFORMATION NV-140 LISTS 76 PROFILE PAGE 3 RUHHDNA0501 UNCLAS

LOCATIONS FOR THESE 14 ISLANDS). REF TWX SPECIFIES PROFILE SAMPLING ONLY AND WITH 6 INCREMENTS PER PROFILE EQUALLING 6318 TOTAL SAMPLES. COMPARE THESE NUMBERS TO POSSIBLE PRODUCTION RATES RAISES THE FOLLOWING QUESTIONS:

1. WHAT PROFILE LOCATION DENSITY IS ACCEPTABLE? (IS A GRID ACCEPTABLE?)
2. WHAT TRADE OFFS CAN BE MADE TO REDUCE SAMPLE LOAD (E.G. REDUCE NO. OF ISLANDS, N. OF CHEMICAL ANALYSIS REQUIRED PER PROFILE)?
3. CAN INCREASED MANPOWER BE PROVIDED IN TIMELY MANNER (I.E. ALT 2)?
4. IS IT REASONABLE TO ASSUME LAB OPERATIONS UNTIL 1980?
5. ARE ALL ORGANIZATIONS INVOLVED IN THE CLEANUP WILLING TO COMMIT THEMSELVES TO THIS NEW TASK?

OTHER QUESTIONS RELATING ARE:

1. A METHOD IS NEEDED TO INTEGRATE OVER THE 10, 15 AND 20 CM INCREMENTS SPECIFIED IN THE PROFILE? SOME OPTIONS - USE EXISTING ON-ISLAND EQUIPMENT AND TAKE A 5 CM (10 CM WIDE, 10 CM LONG) THICK SECTION FROM THE MIDDLE (TOP OR BOTTOM) OF THE LAST 3 LARGE IN-

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CREMENTS AND INTEGRATE OVER THE PROFILE MATHEMATICALLY OR DEVISE A METHOD OF SAMPLING THE INCREMENT INTACT WHICH INTEGRATES OVER THE ENTIRE INCREMENT MECHANICALLY.

2. SHOULD CONSIDER SURFACE MEASUREMENT WORK OF IMP AND RELATED LAB WORK AS ESTIMATE OF SURFACE ACTIVITY FOR CS-137, AM-241 AND PU-239, 240. COVERAGE IS BETTER THEREFORE STATISTICS OFR ACTIVITY DISTRIBUTION WOULD BE BETTER - PRELIMINARY WORK HERE INVESTIGATING THE CORRELATION BETWEEN VARIOUS ISOTOPES AND SR-90 FROM NV-140 DATA SUGGESTS THIS METHOD MIGHT BE USED TO FILL IN DATA GAPS, PARTICULARLY FOR SURFACE INFORMATION.

FINALLY - IT IS NECESSARY TO SCOPE THE SIZE OF THE OVERALL TASK AS ILLUSTRATED ABOVE SO THAT SUFFICIENT PLANNING CAN BE MADE TO FIT IT

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INTO THE CLEANUP PLAN. THESE DECISIONS SHOULD BE MADE SOON.

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